

## Acrow Bridge Replaces Structurally Deficient Bascule Bridge To Keep Chicago Traffic Moving

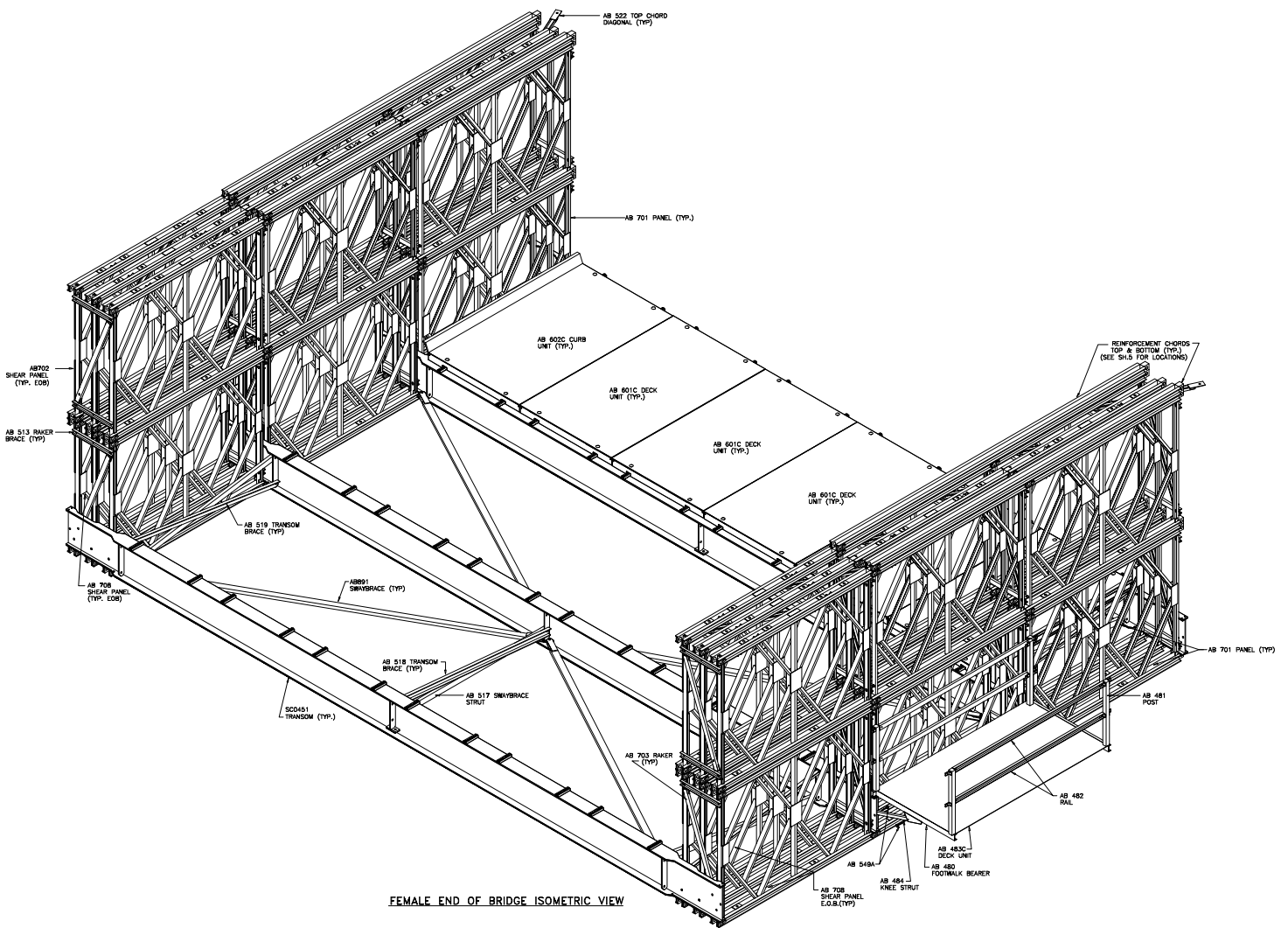
The Trunnion Bascule over the North Canal in Chicago, Illinois was more than 100 years old and structurally deficient. Acrow worked with the Chicago Department of Transportation and general contractor, F.H. Paschen to deliver a 90 day removal and replacement project.



Acrow bridge applications range from long term and permanent solutions to detours, temporary and emergency replacement. As with many Acrow applications, the length of time of a temporary installation varies dramatically; the Division Street Bridge is a prime example. Despite rehabilitation projects in the past, the bridge no longer functioned mechanically. As a result, the plan to replace the bridge was sped up by a year and moved to an emergency project which required a temporary replacement solution. While construction windows are typically small, the Division Street project had a timeline that few could realistically achieve.

Acrow worked with CDOT and designed and engineered a bridge and installation solution to meet the complex site constraints and camber requirements within the emergency timeframe. The interim Acrow Bridge was designed for two lanes of commuter traffic with two bike lanes and cantilevered 5 foot pedestrian bridges off both sides to provide adequate space for expected foot traffic. It was installed in just 37 days and allowed CDOT to complete the emergency project earlier than anticipated. The general contractor, FH Paschen was awarded Contractor of the Year for 2014 by Chicago Department.

The interim Acrow Bridge is expected to be in place for 4-5 years before the replacement bridge is erected.



FEMALE END OF BRIDGE ISOMETRIC VIEW

## Specifications

### Bridge length:

Acrow supplied 260 linear feet in 60-140-60 independent spans

### Bridge width:

The Acrow Bridge has 36 feet clear travel between guide rails. Use of space in 2 traffic lanes and 2 pedestrian bike lanes

### Guide rails:

A test level 4 guide rail system was supplied by Acrow for the bridge

### Deck surface:

Epoxy Aggregate provided by Acrow Bridge

### Bridge erection:

Full cantilever launch in multiple stages

### Live Load:

The bridge is designed in Accordance with AAASHTO LRFD bridge design specs to HS-20 vehicular

### Bridge design:

- (A) Panel Chords, diagonals and verticals, panel reinforcing chords, Rakers to AASHTO M223 GD 65
- (B) Decking, raker brace, transom, top chord, brace, swaybrace, transom brace, diagonal chord brace to AASHTO GD 50
- (C) Panel Pins to ASTM A 193 GD B7
- (D) Bolts to AASHTO M164M – A325

### Bridge finish:

- All Major components galvanized to AASHTO M111-ASTM A 123
- All bolts are hot dipped galvanized
- All Pins are electro galvanized